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# INTERNATIONAL STANDARD

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**Halogen-free thermoplastic insulated and sheathed flexible cables of rated voltages up to and including 300/300 V –  
Part 1: General requirements and cables**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**HALOGEN-FREE THERMOPLASTIC  
INSULATED AND SHEATHED FLEXIBLE CABLES  
OF RATED VOLTAGES UP TO AND INCLUDING 300/300 V –****Part 1: General requirements and cables****FOREWORD**

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International Standard IEC 63010-1 has been prepared by IEC technical committee 20: Electric cables.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
20/1760/FDIS	20/1773/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 63010 series, published under the general title *Halogen-free thermoplastic insulated and sheathed flexible cables of rated voltages up to and including 300/300 V*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

**HALOGEN-FREE THERMOPLASTIC  
INSULATED AND SHEATHED FLEXIBLE CABLES  
OF RATED VOLTAGES UP TO AND INCLUDING 300/300 V –**

**Part 1: General requirements and cables**

## 1 Scope

This part of IEC 63010 applies to cables with insulation and sheaths based on halogen-free thermoplastic compounds for use with small devices and for short connections to desktop electrical appliances where flexibility is of prime importance. These cables have a voltage rating  $U_0/U$  up to and including 300/300 V. Maximum operating temperature for the cables in this document is 70 °C.

NOTE 1 For these types of flexible cables the term cord is also used.

NOTE 2 Unlike other cables that are described as “halogen-free” as part of an overall fire performance capability, cables conforming to IEC 63010 have no requirements relating to evolution of smoke.

NOTE 3 Not to be used for fixed installation, extension leads or completed cordsets longer than four meters.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60227-2:1997, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 2: Test methods*

IEC 60227-2:1997/AMD1:2003

IEC 60228:2004, *Conductors of insulated cables*

IEC 60332-1-2:2004, *Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame*

IEC 60684-2, *Flexible insulating sleeving - Part 2: Methods of test*

IEC 60754-1, *Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content*

IEC 60754-2, *Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity*

IEC 60811-401, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 401: Miscellaneous tests - Thermal ageing methods - Ageing in an air oven*

IEC 60811-501, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 501: Mechanical tests - Tests for determining the mechanical properties of insulating and sheathing compounds*

IEC 60811-502, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 502: Mechanical tests - Shrinkage test for insulations*

IEC 60811-504, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 504: Mechanical tests - Bending tests at low temperature for insulation and sheaths*

IEC 60811-505, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 505: Mechanical tests - Elongation at low temperature for insulations and sheaths*

IEC 60811-506, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 506: Mechanical tests - Impact test at low temperature for insulations and sheaths*

IEC 60811-508, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 508: Mechanical tests - Pressure test at high temperature for insulation and sheaths*

IEC 62440, *Electric cables with a rated voltage not exceeding 450/750 V - Guide to use*

IEC 63010-2:2017, *Halogen-free thermoplastic insulated and sheathed cables of rated voltage up to and including 300/300 V – Part 2: Test methods*